

• COLORADO RIVER •
AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT

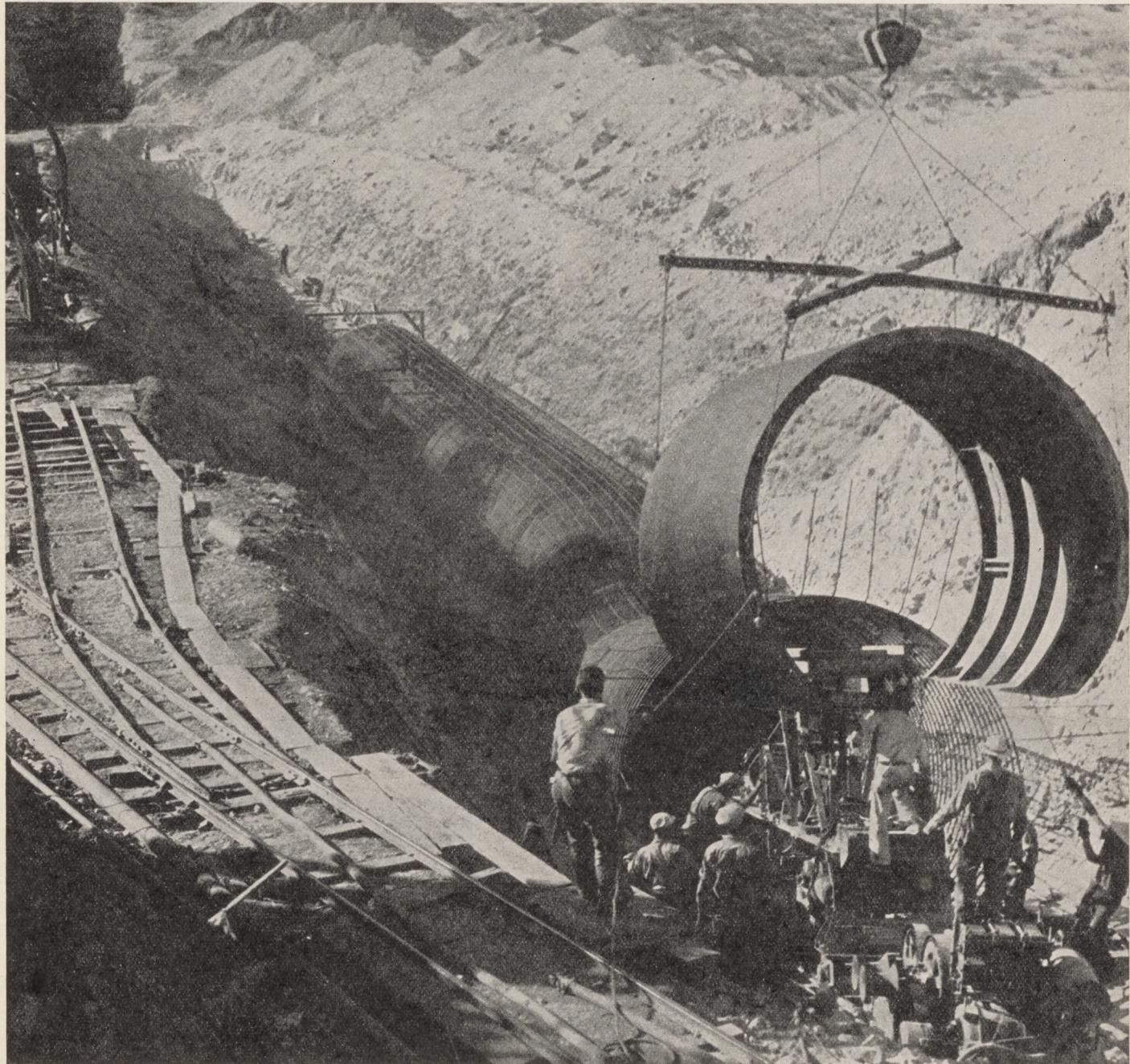
OF SOUTHERN CALIFORNIA



Vol. III.

OCTOBER 10, 1936

No. 19



Fall open work construction starts on main aqueduct. Placing steel and forms for siphon on Division 4, with east portal of Blind Canyon tunnel in left background.

• COLORADO RIVER •
AQUEDUCT NEWS
 THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

LOS ANGELES, CALIFORNIA

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. III October 10, 1936 No. 19

Resumption of Open Work Gives Jobs to Hundreds of Men

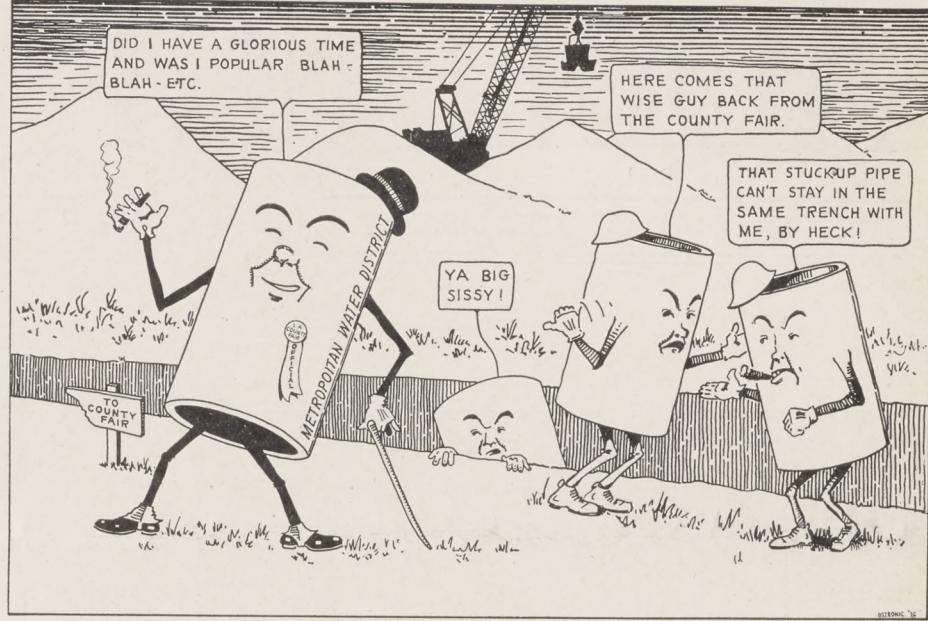
The "big push" is under way again. Open work construction on the main aqueduct, suspended since last June, because of the intense summer heat on the desert, was officially resumed on October 1. Immediate employment for more than a thousand additional men will be the first result of reopening the work. Hundreds of carpenters, concrete finishers, welders, and reinforcing steel workers are daily being employed in addition to the 7,400 people now employed on the aqueduct.

Included in the big parade was the J. F. Shea Co. crews on Schedule 18. Located at the northern end of the Coachella valley, the work in this schedule consists of the construction of conduit between the Big Morongo and the San Andreas siphons.

Up on Shaver Summit, construction work on the most westerly of the five big pumping plants has been started. Under the supervision of Crawford Strohacker, the Dixon-Case crews began excavation for the switch yard in the Hayfield pumping plant, and carpenters were engaged in building a camp for the construction employees.

At Parker Dam, Frank Crowe's men were working on the upper coffer dam, and the outlet channels preparatory to diverting the Colorado River and beginning excavation for the main dam.

Present estimates indicate that from 1,000 to 1,500 additional men will be required for the various phases of work started on the first of this month. Applicants are reminded that only bona fide residents of the District can be hired, and that they must be cleared through the M. W. D. Labor Office at 770 So. San Pedro St., Los Angeles.



THE RETURN OF THE PRODIGAL (PIPE).

Artist Ostronic sits in at the happy (?) welcome home party given at the trench on schedule 6 of the Distribution Division when the M.W.D. exhibit at the L. A. County Fair returned to the fold. Two pipe sections from the J. F. Shea Company's job were the main features of the exhibit.

Directory

BOARD OF DIRECTORS

W. P. Whitsett, Chairman
 Franklin Thomas, Vice-Chairman
 S. H. Finley, Secretary
 Anaheim E. P. Hapgood
 Beverly Hills Arthur Taylor
 Burbank J. L. Norwood
 Compton Warren W. Butler
 Fullerton Walter Humphreys
 Glendale Bernard Brennan
 Long Beach William M. Cook
 Los Angeles I. Eisner
 Los Angeles Perry H. Greer
 Los Angeles Otto J. Emme
 Los Angeles D. W. Pontius
 Los Angeles John R. Richards
 Los Angeles Victor H. Rossetti
 Los Angeles W. P. Whitsett
 Pasadena Franklin Thomas
 San Marino J. H. Ramboz
 Santa Ana S. H. Finley
 Santa Monica Edmund S. Gillette
 Torrance Charles T. Rippy
 Charles H. Toll, Treasurer
 D. W. Pontius, Controller

GENERAL STAFF

General Manager and Chief Engineer F. E. Weymouth
 Asst. Gen. Mgr. J. L. Burkholder
 Asst. Chief Engineer Julian Hinds
 General Counsel James H. Howard
 Asst. Gen. Counsel Arthur A. Weber
 Asst. Controller J. M. Luney
 General Supt. James Munn
 Chief Elec. Engineer J. M. Gaylord
 Asst. to Gen. Mgr. Don J. Kinsey
 Secy. to Gen. Mgr. Elisabeth von Hagen

DIVISION ENGINEERS

Divisions 1 & 2 W. E. Whittier
 Divisions 2 & 3 John Stearns
 Division 4 R. C. Booth
 Divisions 5 & 6 J. B. Bond
 Distribution R. B. Diemer
 Transmission Robert N. Allen

SUPERINTENDENTS

(Main Aqueduct Tunnels)
 Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., W. A. Huntington and L. M. Ramey, Tunnel Supts.

Coxcomb and East Iron Mt.

tunnels, Winston Bros., R. V. Johnson, Gen. Supt.

Iron Mt. Tunnel, West Portal, Utah Construction Co., Ben Arp, Gen. Supt.

East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon, John Will, Gen. Supt.

Coachella Tunnel, Dist. Force Acct., R. C. Booth, Gen. Supt.

East Coachella Tunnel and 1000 Palms Tunnel, Concrete, V. T. Davis, Supt., J. C. Fisher, Guy Taylor, Gen. Foremen.

Thousand Palms Siphon, M. Hjalmarson, Supt.

Long Canyon and Wide Canyon Tunnels, Concrete, Kenneth MacIsaac, Supt.

Little Morongo, Excavation, R. Ferry, Supt.

San Jacinto Tunnel, District Force Acct., B. C. Leadbetter, Gen. Supt.; A. L. Simpson, John Austin and C. E. Sides, Tunnel Supts.; Chas. F. Thomas, Jr., Gen. Foreman.

Valverde Tunnel, Dravo Contr. Co., R. W. Remp, Gen. Supt.; H. C. Richardson, Asst. Gen. Supt.; Fred Youmans, Tunnel Supt.

(Distribution Tunnels)

Monrovia tunnels Nos. 1, 2 and 3, West Construction Co., H. E. Carleton, Gen. Supt.; O. V. H. H. Mason, Peter Brisbois and Angus MacDonnell, Tunnel Supts.

Sierra Madre tunnel, J. F. Shea Co., Inc., Edmund H. Shea, Supt.

Pasadena tunnel, San Rafael tunnels Nos. 1 and 2, and Monrovia tunnel No. 4, L. E. Dixon Co., Bent Bros., Inc., and Johnson, Inc., S. D. Hackley, P. C. Guinn and W. N. Evans, Supts.

(Canal, Siphon, Conduit)

Schedules Nos. 1, 1A, 1B, 10, 10A, 10B, 11, 11A, 11B, 11C, 13, 13A, and 13B, Aqueduct Construction Co., S. T. Corfield, Gen. Supt.; Charles Harlowe, Jr., Excav. Supt.

Schedules Nos. 2, 2A, 2B, 3,

3A, 3B, 7 and 7A, Barrett & Hilp and Macco Corp.; H. W. McKinley, Supt.

Schedules Nos. 4, 4A, 5 and 5A, Jahn & Bressi Construction Co., Joseph Muscolo, Gen. Supt.; Dominick Bressi, Asst. Gen. Supt.

Schedules Nos. 6, 8, 8A and 8B, Clyde W. Wood and M. J. Bevanda, A. F. Weesner, Gen. Supt.; L. L. Green, Excav. Supt.; A. V. Fisher and V. S. Price, Concrete Supts.

Schedules Nos. 9, 9A, 9B and 9C, The Utah Construction Co., Ben Arp, Gen. Supt.; E. C. Caldwell, Excav. Supt.

Schedules Nos. 12 and 12A, Three Companies, Inc., C. J. Kavanagh, Supt.

Schedules Nos. 14, 15 and 16, Thompson-Starrett Co., Inc., Rodney Smith, Resident Engineer; William Hayes, Excav. Supt.

Schedule 17, Dist. Force Acct., H. Hjalmarson, Supt., (Fan Hill).

Schedule 18J, Morrison-Knudsen, J. O. Young, Gen. Supt.

Schedules Nos. 18, 19 and 20, J. F. Shea Co., Inc., H. F. Rennebohm, Supt.

Schedules Nos. 20A, 20B, 20C, 21, 22 and 23, The Griffith Co., Harry Davis, Supt.

(Distribution Pipe Line)

Schedules No. 4P & 5P, American Concrete & Steel Pipe Co., Wm. A. Whiting, Gen. Supt.; D. H. Rankin, Plant Supt.; J. C. Connell, Const. Supt.

Schedules 6P & 7P, J. F. Shea Co., Inc., Gilbert Shea, Gen. Supt.; Don Lind, Plant Supt.

Schedule 8P, United Concrete Pipe Corp., John Huber, Plant Supt.; Charles Johnston, Const. Supt.

Schedules 2B & 2S, Western Pipe & Steel Co., L. L. White, Supt.

(Dams)

Cajalco dam, The Griffith Co., Harry Davis, Gen. Supt.

Parker dam, Six Cos., Inc., Frank Crowe, Gen. Supt.; E. A. Moritz, Eng. in charge.



World Power Conference party at Cabazon shaft, September 28. Left to right, top row: E. L. Falkenburg, M.W.D.; S. de Britos, Brazil; J. R. Davidson, England; S. Rjurll, Sweden; B. M. Fellenius, Sweden; L. H. Pettersson, Sweden. Middle row: L. B. Crosby, U.S.A.; E. Umark, Sweden; Dr. J. Kaximierz, Poland; W. R. Nerne, Switzerland; K. Baalsrud, Norway; Prof. T. Jerdik, Czechoslovakia; Llewellyn Evans, U.S.A.; Conrad Sangren, M.W.D.; Prof. Wolmar Fellenius, Sweden. Bottom row: E. Ishii, Japan; Gan Kobza, Czechoslovakia; Dr. F. Bricle, Switzerland; F. Contessini, Italy; B. C. Leadbetter, M.W.D.; Julian Hinds, M.W.D.; Dr. F. A. Schunku, Switzerland; R. B. Diemer, M.W.D.; Prof. E. Scimemi, Italy; F. C. Griffin, England (India); D. Karol Pomianuski, Poland.

Aqueduct Inspected by Foreign Engineers

Representing 10 nationalities, a group of 22 foreign engineers inspected construction work on the Colorado River Aqueduct on Monday, September 28. They were delegates to the World Power Conference, who, after their assembly in Washington, D. C., toured the United States visiting the nation's famous construction projects.

The group was composed of engineers and executives of power companies and water supply systems located all over the world. Many of the delegates have been sent to the conference as representatives of their governments. In most cases, these men were entirely familiar with the general details of the aqueduct, having read about it in their own technical publications. The construction methods used on the aqueduct, however, was subject to much comment by these engineers, particularly as to size and speed of operation of the equipment used.

Accompanied by Assistant Chief Engineer Julian Hinds, and Distribution Engineer R. B. Diemer, the party went by motor bus from the Glendale railroad station to the pipe laying operations on Schedule 8 near Glendora, and then to the precast concrete pipe fabricating plant at Rochester. From the pipe plant the group was taken to the Cabazon shaft of the San Jacinto tunnel, and to Cajalco Reservoir.

Of particular interest to the District engineers was the presence in the group of Professor Wolmar Fellenius, of Sweden, whose research on earthfill structures was a basis of some of the design of the Cajalco dam and dike. Also in the party was Major J. R. Davidson, Chief Engineer of the Metropolitan Water Board of London, and F. C. Griffin, Chief Engineer of the Public Health Department of the State of Bengal, India.

Information for Absentee Voters

Aqueduct employees who will be absent from their homes on the November 3 General Election have the right, under the law, to cast absentee voters' ballots. Instructions covering the necessary procedure are being forwarded by the General Manager this week to General Superintendent and Division Engineer. Notices explaining this procedure will be posted in all aqueduct mess halls, commissaries and field offices. Forms for absentee ballots will be made available to all employees who require them.

LOS ANGELES COUNTY voters must make application through the mail for an absentee ballot to W. M. Kerr, Registrar of Voters, County of Los Angeles, Los Angeles, Calif. ORANGE COUNTY voters must make their application through the mail to J. M. Backs, County Clerk, County of Orange, Santa Ana, Calif.

Such application must be received by the aforesaid election officers between October 14 and October 29, 1936.

Employees are particularly cautioned to fill out their application blanks in their own handwriting; to mark their ballots with the regulation election X stamp; to mark and seal their ballots in the presence of a Notary Public or other public officer authorized to administer oaths; to fill out the necessary affidavit which must accompany the ballot; that the officer administering the oath must be a resident of the county in which the ballot is stamped and sealed.

In addition to the procedure outlined above for making application for ballots, employees may make application in writing for an absentee voters' ballot by personally appearing at the office of the Registrar of Voters of Los Angeles County or the County Clerk of Orange County at any time between October 14 and October 29.

Douglas Howells Moors, Vice President of the Griffith Company, died on September 28, 1936. He was born near Bellingham, Washington, on February 3, 1893. Mr. Moore obtained his entire construction experience during his association with the Griffith Company, having first been employed by the company in 1910. During the World War he served with the 117th Engineers, Rainbow Division, A. E. F. Being in charge of construction for the Griffith Co., he had supervision over conduit and siphon work for the firm on the M. W. D. aqueduct, and also the Cajalco dam and dike. He is survived by his mother, his wife and a daughter.

CONSTRUCTION

TUNNELS

TUNNEL EXCAVATION (MILES)

Completed Remaining

Aqueduct	86.39	5.72
Distribution	14.43	1.77
Total.....	100.82	7.49

September 1 to September 30, 1936

*TUNNEL LINING (MILES)

Completed Remaining

Aqueduct	59.58	32.53
Distribution	3.70	12.46
Total.....	63.28	44.99

*Arch considered to equal 0.9 completed section.

TUNNEL PROGRESS

CONTRACTOR	TUNNEL	LENGTH IN FEET	EXCAVATION IN FEET					LINING IN FEET				
			NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING	ARCH OR INVERT	NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE

AQUEDUCT—CONTRACT

WALSH CONSTRUCTION CO.	COLORADO RIVER	5,482		Completed	5,482	0	Arch			0	5,475	7
	COPPER BASIN NO. 1	705		Completed	705	0	Arch			0	696	9
	COPPER BASIN NO. 2	11,568		Completed	11,568	0	Arch			0	696	9
	WHIPPLE MOUNTAIN East from Adit West from Adit	(32,238) 18,336 13,902		Completed Completed	(32,238) 18,336 13,902	(0) 0 0	Arch Arch	72	106.1	7,647 0	11,568 0 0	(32,238) 6,944 4
WINSTON BROTHERS	IRON MT. (E. PORTION)	(23,645)			(23,645)	(0)	Invert			0	0	9,902
	East from Shaft	9,902		Completed	9,902	0	Arch			0	9,887	15
	West from Shaft	13,743		Completed	13,743	0	Invert	28	279.4	7,701 0	7,873 13,728	5,870 15
UTAH CONSTRUCTION CO.	IRON MT. (W. PORTION)	16,208		Completed	16,208	0	Arch			0	16,208	0
	COXCOMB (From E. Portal)	17,795		Completed	17,795	0	Arch	20	229.6	4,592	4,592	11,616
BRODERICK & GORDON	E. EAGLE (From W. Portal)	9,440		Completed	9,440	0	Invert			0	0	17,795
	W. EAGLE (E. PORTION) East from Adit West from Adit	(15,845) 7,871 7,974		Completed Completed	(15,845) 7,871 7,974	(0) 0 0	Arch			0	0	(15,845) 7,871 423
	VALVERDE East Portal to Shaft 3 West from Shaft 3 }	(38,015) 21,415		Completed Completed	(38,015) 21,415	0	Arch	50	96.0	4,800	7,551	
DRAVO CONTRACTING CO.	East from Adit }	12,067		Completed	8,964	0	Invert			0	38,014	1
	West from Adit	4,533		Completed	3,103	0	Arch			0	38,014	
	TOTALS Ft. Miles	170,941 (32.38)			170,941 (0)	0	Arch	122 48	102.0 256.1	12,447 12,293	128,417 68,218	42,524 102,723

AQUEDUCT — FORCE ACCOUNT

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	EAST COACHELLA	(96,605)		Completed	(96,605)	0	Arch			0	28,512	0	
	East Portion	28,512		Completed	28,512	0	Invert			0	28,129	383	
	West Portion	68,093		Completed	68,093	0	Arch			0	41,830	26,263	
	1000 PALMS NO. 1 (From W.P.)	16,058		Completed	16,058	0	Invert	78	56.3	4,389	0	68,093	
	1000 PALMS NO. 2	3,838		Completed	3,838	0	Arch	78	43.2	3,370	7,937	8,121	
	WIDE CANYON NO. 1	14,305		Completed	14,305	0	Arch			0	3,838	0	
	WIDE CANYON NO. 2	848		Completed	848	0	Arch			0	3,838	0	
	SEVEN PALMS (From E. Prtl) (From W. Prtl)	4,810 11,920		Completed	4,810 11,920	0	Arch			0	14,305	0	
	LONG CANYON	15,305		Completed	15,305	0	Arch	53	82.5	4,371	0	15,305	
	BLIND CANYON	6,836		Completed	6,836	0	Arch			0	16,730	0	
	MORONGO NO. 1	5,725		Completed	5,725	0				0	5,725		
	MORONGO NO. 2	1,902		Completed	1,902	0				0	1,902		
	SAN JACINTO	(68,866)			(38,652)	(30,214)				0	(68,866)		
	Cabazon Shaft to East Portal	8,880	14	5.1	71	8,880	0						
	Cabazon to Lawrence	26,817	90	4.9	444	9,648	17,169						
	Cabazon Pioneer	18,119	90	5.8	520	1,123	16,996						
	Lawrence Adit	5,651	90	2.5	223	1,390	4,261						
	Potrero Pioneer	15,163	90	8.6	774	2,386	12,777						
	Potrero to Lawrence	17,670	90	8.0	723	4,625	13,045						
	Potrero Shaft to West Portal	15,499		Completed	15,499	0	Invert	5	139.2	696	2,990	65,876	
	TOTALS Ft. Miles	247,018 (46.78)	194	6.4	1,238 (0.23)	216,804 (41.06)	30,214 (5.72)	Arch Invert	209 5	58.0 139.2	12,130 696	133,676 34,957	113,342 212,061

DISTRIBUTION—CONTRACT

GRIFFITH CO.	CAJALCO OUTLET	2,439	50	8.1	405	2,019	420			66	32.8	2,162	0	2,439
	MONROVIA NO. 1 (From W.P.)	7,868		Completed		7,868	0			0			0	3,353
	MONROVIA NO. 2 (From Jct.1)	940		Completed		940	0			0			0	855
WEST CONSTRUCTION CO.	MONROVIA NO. 3	(32,105)	86	10.1	871	10,861	(4,130)			75	23.2	1,740		(32,069)
	East from Adit	11,340	86	5.1	436	4,862	479							
	West from Adit }	20,765	86	6.2	535	12,252	3,651							
DIXON, BENT BROS. & JOHNSON	MONROVIA NO. 4 (From W.P.)	8,096	74	7.0	517	4,350	3,746						0	8,084
	SIERRA MADRE (From E. Prtl)	6,700		Completed		6,700	0			22	12.0	265	6,700	0
	PASADENA EAST	5,546		Completed		5,546	0				0		5,546	0
DIXON, BENT BROS. & JOHNSON	PASADENA (From West Portal)	12,140		Completed		12,140	0			75	23.2	1,740	2,864	9,276
	SAN RAFAEL NO. 1 (From W.P.)	4,040		Completed		4,040	0						0	4,040
	SAN RAFAEL NO. 2 (From E.P.)	5,669	75	10.0	750	4,617	1,052						0	5,669
	TOTALS Ft. Miles	85,543 (16.20)	457	7.7	3,514 (0.67)	76,195 (14.43)	9,348 (1.77)	Full Section	163	25.6	4,167 (0.79)	19,552 (3.70)	65,785 (12.46)	

PROGRESS

CANAL, CONDUIT AND SIPHON (MILES)
Completed Remaining

Excavation 118.15 27.57
Concrete 105.28 39.39
Back Fill 49.60 32.86

CANAL, CONDUIT, SIPHON & PIPE LINES

September 12 to September 26, 1936

DISTRIBUTION PIPE LINE (MILES)
Completed Remaining

Excavation 12.93 28.65
Concrete 11.08 30.50
Back Fill 9.47 32.11

AQUEDUCT

SCHED. NO.	CONTRACTOR	FEATURES	Length In Feet	EXCAVATION—Feet			CONCRETE—Feet			BACKFILL—Feet		
				Period	To Date	Remain'g	Period	To Date	Remain'g	Period	To Date	Remain'g
1	AQUEDUCT CONSTR. CO.	Conduit and Siphons	22,025	0	22,025	0	0	22,025	0	0	22,025	0
2	BARRETT & HILP AND MACCO CORP.	Conduit and Siphons	30,569	0	29,314	1,255	0	24,584	5,985	0	22,400	8,169
3	JAHN & BRESSI CONSTR. CO.	Canal and Siphons	40,499	0	39,574	925	0	32,104	8,395	0	1,390	10,955
4	WOOD AND BEVANDA	Canal and Siphons	53,218	0	53,218	0	0	53,218	0	0	1,992	1,083
5	BARRETT & HILP & MACCO CORP.	Canal and Siphons	53,588	0	53,588	0	0	53,588	0	0	2700	1,320
6	WOOD AND BEVANDA	Siphon	15,521	0	15,521	0	0	15,521	0	0	13,043	2,478
7	BARRETT & HILP & MACCO CORP.	Canal and Conduit	27,707	0	27,707	0	0	27,707	0	0	12,170	0
8	WOOD AND BEVANDA	Canal and Siphons	49,579	0	49,579	0	0	49,174	405	0	7,090	800
9	UTAH CONSTRUCTION CO.	Canal, Conduit and Siphons	47,363	30	45,904	1,459	0	44,074	3,289	0	1,975	4,224
10	AQUEDUCT CONSTR. CO.	Canal and Siphons	44,505	0	44,505	0	0	44,505	0	0	3,594	1,256
11	THREE COMPANIES, INC.	Canal, Conduit and Siphons	44,002	3,049	15,619	28,383	0	44,002	0	0	0	10,322
12	AQUEDUCT CONSTR. CO.	Conduit and Siphons	32,977	0	28,789	4,188	0	24,652	8,325	0	23,030	9,947
13	THOMPSON-STARRATT CO.	Canal, Conduit and Siphons	31,965	526	25,222	6,743	0	11,782	20,183	0	0	3,665
14	M. W. D.—FORCE ACCT.	Conduit and Siphons	32,366	0	32,366	0	0	32,366	0	0	32,366	0
15	J. F. SHEA CO., INC.	Conduit and Siphons	35,849	2,215	2,943	32,906	0	403	35,446	0	0	35,849
16	J. F. SHEA CO., INC.	Conduit and Siphons	19,359	0	0	19,359	0	0	19,359	0	0	19,359
17	M. W. D.—FORCE ACCT.	Conduit and Siphons	21,961	1,118	18,630	3,331	0	12,615	9,346	0	10,843	11,118
18	J. F. SHEA CO., INC.	Conduit and Siphons	27,537	440	18,450	9,087	58	14,163	13,374	0	13,939	13,598
19	J. F. SHEA CO., INC.	Conduit and Siphons	37,364	0	0	37,364	0	0	37,364	0	0	37,364
20	M. W. D.—FORCE ACCT.	Siphons	18,618	0	18,618	0	0	18,618	0	0	18,618	0
20 A & B	GRIFFITH COMPANY (Outlet Channel Unlined)	Siphons	735	0	705	30	0	0	735	0	0	735
21	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphons	14,613	0	14,613	0	0	14,613	0	0	14,613	0
22	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphons	7,229	0	7,229	0	0	7,229	0	0	7,229	0
23	WINSTON BROS. CO. & WILLIAM C. CROWELL	Conduit and Outlet Channel	38,695	3	38,695	0	0	33,145	0	0	33,145	0
3	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Gene Inlet)	1,877	0	1,676	201	0	589	1,288	0	530	1,268
4	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Copper Basin)	450	0	116	334	0	0	450	0	0	0
TOTALS			750,171	7,381	604,606	145,565	58	536,675	207,946	0	242,692	173,510

DISTRIBUTION PIPE LINES

1	AMER. CONC. & STL. PIPE CO.	Precast Concrete Pipe	12,227	0	0	12,227	0	0	12,227	0	0	12,227
2	WESTERN PIPE & STL. CO.	Welded Steel Pipe	54,530	2,423	19,799	34,731	2,145	10,428	44,102	564	6,303	48,227
3	AMER. CONC & STL. PIPE CO.	Precast Concrete Pipe	20,124	0	0	20,124	0	0	20,124	0	0	20,124
4	J. F. SHEA CO., Inc.	Precast Concrete Pipe	25,867	245	25,867	0	314	25,867	0	1,037	25,867	0
5	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	24,895	2,105	22,790	1,991	2,120	22,904	1,370	1,370	1,370	23,525
6	J. F. SHEA CO., Inc.	Precast Concrete Pipe	27,348	750	5,079	22,269	732	4,887	22,461	665	3,856	23,492
7	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	30,044	0	0	30,044	0	0	30,044	0	0	30,044
8	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	24,525	2,357	15,407	9,118	2,444	15,350	9,175	1,835	12,628	11,897
TOTALS			219,560	7,880	68,257	151,303	7,626	58,523	161,037	5,471	50,024	169,536

MISCELLANEOUS CONSTRUCTION

September 12 to September 26, 1936
AQUEDUCT PUMPING PLANTS AND APPURTENANT WORKS

CONTRACTOR	FEATURES	EXCAVATION—Cu. Yds.	CONCRETE—Cu. Yds.			STEEL—Tons		
			Est.Quan.	Period	To Date	%	Est.Quan.	Period
WINSTON BROS. CO. & WILLIAM C. CROWELL	Intake Plant	102,400	4,430	93,846	91.6		2,052	0
WOOD AND BEVANDA	Gene Plant	92,600	0	79,829	86.2		1,707	0
WOOD AND BEVANDA	Iron Mt. Plant	358,700	347	224,592	62.6		1,707	0
L. E. DIXON CO.	Eagle Plant	227,695	14,927	141,502	62.1		2,160	0
NOT AWARDED	Hayfield Plant						1,835	37.4
TOTALS		19,704	539,769				0	45.0

BOULDER TRANSMISSION LINE—FRITZ ZIEBARTH

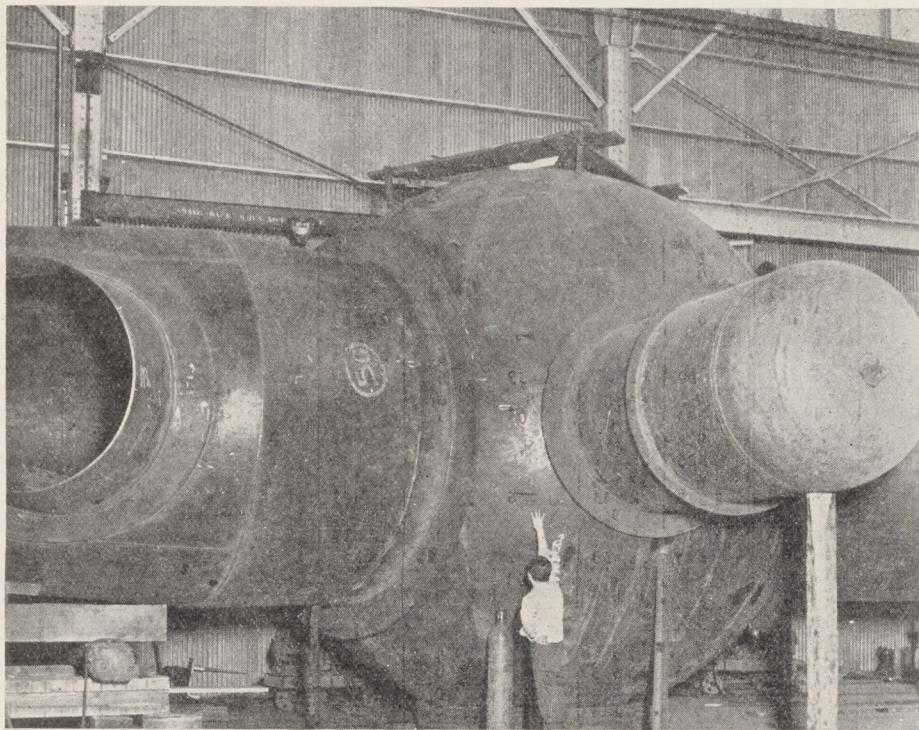
FEATURES	Length-Line Mi.	Period	To Date	Percent	FEATURES	Length-Line Mi.	Period	To Date	Percent
Footings Constructed	237.0	0	166.0	70.0	Converting Spur to Truck Line	7.8	0	7.8	100
Towers Erected	237.0	14	109.0	46.0	Constructing New Trunk Line	139.5	0	139.5	100
Wire Strung	237.0	10	65.0	27.4					

PARKER RESERVOIR—SIX COMPANIES, INC.

FEATURES	Est. Quan.	Period	To Date	Percent	FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnels—Excav.	3,463 Ft.	0	3,463	100	Diversion Tunnel	2,000 Ft.	0	2,000	100
Diversion Tunnels—Concrete	3,363	0	3,363	100	Dam & Dike Excavation	651,000 C.Y.	16.666	406,636	62.5
Dam Excavation	1,391,000 C.Y.	300	280,703	20.2	Dike Fill	4,113,000 C.Y.	0	3,036,900	73.8
Dam Concrete	277,900 C.Y.	0	0	0	Dam Fill	3,410,000 C.Y.	114.800	688,000	20.2

COMPLETED FEATURES

TUNNELS					CANAL, CONDUIT AND SIPHON				
CONTRACTOR	TUNNEL	Length in Miles	Work Started	Work Completed	CONTRACTOR	FEATURE AND NAME OR SCHEDULE	Length in Miles	Work Started	Work Completed
MORRISON-KNUDSEN CO.	Mecca Pass, No. 1, 2 & 3	1.13	7-17-33	2-10-35	UNITED CONC. PIPE CO.	LITTLE MORONGO SIPHON	0.13	2-27-34	8-20-34
WEST CONSTRUCTION CO.	Whitewater Nos 1 & 2	1.94	7-18-33	4-15-35	M.W.D.—FORCE ACCT.	FAN HILL COND. & SIPHON	0.32	10-21-33	11-19-34
SHOFNER & GORDON	Hayfield No. 2	1.03	7-8-33	7-27-33	GRIFFITH COMPANY	SCHEDULE NO. 20-C	1.33	5-3-35	9-14-35
HAMILTON & GLEASON	Bernasconi	1.18	4-19-33	11-21-35	MORRISON-KNUDSEN CO.	BIG MORONGO & SAN ANDREAS SIPHONS	1.86	2-12-35	9-16-36
J. F. SHEA CO., INC.	Cottonwood	3.81	6-14-33	12-29-35					
HUNKIN-CONKEY CON. CO.	Hayfield No. 1	1.84	10-21-33	1-9-36					
DIXON & BENT BROS.	W. Eagle-W. Por.	2.02	9-8-33	3-12-36					
TOTALS					TOTALS				



Not a stratosphere balloon, but a great steel bulb—part of the manifold for the Gene Pumping Plant. Picture taken at Consolidated Steel Company's Los Angeles plant where manifold was fabricated and set up prior to shipment to Gene plant.

Steel Plant "Aqueducters" on 3 Shift Basis

Working 24 hours a day amid the deafening roar of steel chipping hammers, and the scurry and bustle of overhead cranes, is an unsung legion of the vast aqueduct army. They are the employees of the Los Angeles plants of the Western Pipe and Steel Company, and the Consolidated Steel Company. Practically the entire force of both plants is continuously engaged in the fabrication of various types of steel for use on the Colorado River Aqueduct.

The largest individual aqueduct job now going through the two shops is the fabrication of the 10 miles of welded steel pipe line for schedule 2S on the Distribution Division. The Western Pipe and Steel Co. are the contractors on the construction of this line, and they in turn have sub-contracted part of the fabrication work to the Consolidated Steel Co. The steel for this line alone amounts to approximately 30,000 tons. The individual pipe sections average 33 feet in length and 10 ft. 8 in. inside diameter. At the present time the wall thickness of the pipe being fabricated is 31/32 of an inch.

The shops work on an "in line" production basis in which flat steel plates go in one end of the plant, and come out the other end as completed pipe sections. Each pipe is made of four plates

each approximately 8 1/4 feet wide by 33 1/2 feet long. Each plate is rolled into a hoop, and the ends (previously beveled) are welded together by an automatic electric arc welding machine. A "bell" end is rolled on one of each set of four, by a machine which handles the inch thick steel as easily as a can opener would crease a tin can. The four individual sections are then welded together, on another automatic welding machine, to form the complete pipe.

Placed on a special car, the pipe section is then rolled into a huge oven where it is "cooked" to relieve stresses set up by the welding. After pressure testing, the pipes are sand-blasted and given a coal tar enamel coating. In most cases this coating is applied to the inside of the pipe only. Although only 3/32 of an inch thick this coating weighs 1,025 lbs. per pipe. The enamel is "spun" on while the pipe is being rotated at 38 R. P. M., or about 1300 feet per minute surface speed.

M. W. D. inspectors working under Chief Inspector C. E. "Ted" Lloyd are Lawrence Bell, R. T. Harrington, Richard Morse and Richard Dittmar at Western, and Larry Mengula, J. C. Maher, G. E. Schultz and Paul Joseph at Consolidated.

Lining Series in Extra Inning

The current backyard world series in the M. W. D. tunnel lining contest seems to offer no hope of establishing an out-and-out winner. With no chance of the game being called for either rain or darkness, a glance at the box score shows both teams (Whipple Mt. and Coachellas) still in the money.

In the 11th inning, the score reads as follows: Whipple Mt. holds record for number of lineal feet of arch placed per shift—week ending October 3, 2286 feet, average 127.0 feet per shift. However, the Coachellas in an earlier inning (week ending August 29) with Long Canyon at bat, established the record for the greatest number of cubic yards of concrete placed—6,582 at an average of 346.4 cubic yards per shift.

A glance at the season's batting average for the two teams (both working three shifts per day) shows that since August 9, the Coachella crew (now in Blind Canyon tunnel) has averaged 89.4 feet per shift, and the Whipple gang, 89.5 feet per shift. Just to add more grief to the scoring job, the two-a-day crew on the east portion of the West Eagle Mt. tunnel placed 1,413 lineal feet in one week, and 1,332 in another. All statistics from the smoking slide rule of Charlie Fredericks.

(Ed. note: The next time the staff of the NEWS picks any hot figures out of the construction progress tables—they'll be sure to wear asbestos gloves.)

BIDS CALLED FOR ON CANYON CROSSINGS

General Manager Weymouth has called for bids to be opened on October 22 for the construction of pipe lines to cross San Gabriel, Monrovia, and Eagle Rock Canyons as part of the upper feeder of the distributing system. When these awards have been made, all of the upper feeder from its beginning near Riverside to the west portal of San Rafael tunnel No. 2, will be under contract for construction. This represents a total distance of 62 miles. The bids called for cover 1107 feet of 9 ft. 8 in. diameter pipe, and 507 feet of 7 ft. diameter pipe. The work is divided into four schedules, two of which (across Monrovia Canyon) are alternatives.

Byron W. Hicks, who has spent a lot of time as an inspector on the Cajalco Reservoir job, has transferred his affections to the other end of the aqueduct, and is now located at Division 1.

NEWS FROM FIELD AND OFFICE

The Field committee in charge of the Employees Annual Picnic have apparently been studying the technique of the old movie serials. With each release about the coming event, they get a little closer to telling the whole story—without actually divulging the plot. First we learned that it was to be a "Bigger and Better" picnic. Then, that the piece de resistance was to be a Bar-B-Que. Still later the date was announced as Sunday, November 8. In the last issue of the NEWS the committee "stirred up the animals" by announcing the various sporting events to be held—and how the Field would demonstrate the proper method of winning said events. Now they are releasing the "next to the last installment." An orchestra will be provided, and the clothes to be worn may be hiking clothes, or sun suits, or bathing suits, or what have you. But—that's as far as we go this time. The place, and the cost (committee please note—this space isn't free, prepare your budget accordingly) will be announced next time. Come early and get a good seat for the grand finale. Be prepared for the thrill of your lives. All will be bared—place, time, cost—all announced at one time.

* * *

Political minded citizens working on the San Jacinto tunnel will be sure to hear all sides of the story before the coming election. Holding down the stump are: Landon (W. A.) at Lawrence, Townsend (C. V.) at Lawrence, and Lemke (John) at Potrero. Mr. Roosevelt works a little to the east of the aqueduct, his payroll address being listed as Washington, D. C.

* * *

George Tauxe Jr. who has been employed in the District's soil laboratory at Cajalco resigned on September 23 to accept a research scholarship from Cornell University at Ithica, New York. He was offered the scholarship as a result of a visit to the dam by the Dean of the College of Engineering of Cornell during the summer. Tauxe's work in the east will consist of the study of soil mechanics in a new department to be established by the University.

* * *

The demure aspect of Harry Leary of Division 4 for the past two months has at last been explained. Operator X-13 reports the elopement and marriage on July 22 of Eleanor Hays and Brother Leary. Sorry, Harry, but you had to pass the cigars some time.

Aqueduct Temperatures

Sept. 15 to Sept. 30, 1936

	Max.	Min.
Div. 1	109°	65°
Div. 2	107°	65°
Div. 3	107°	65°
Div. 4	103°	65°
Divs. 5 and 6	102°	52°

More wedding bells. Olive Louise McNichol and Lyle Hann, Cajalco soil lab, were married at Arlington on September 25. Being close to mother earth must be conducive to romance. This is the second wedding reported from that lab in as many weeks.

* * *

Having demonstrated the latest in late summer wearing apparel for men, our style scout, J. M. Luney, is now in the east to bring back the ultra in fall and winter haberdashery. The real reason for his vacation in New York, however, was to take in the World Series. That hearty warwhoop that rattled the tubes of your radio every time the Yankees made a home run was easily identified as the dulcet voice of Mr. Luney.



The genial face under the shining hard hat is that of R. Ferry, Superintendent at Morongo on Division 4. He has been with the District since August, 1934. Most people think that the "R" stands for "Red" by which name he is generally known. Records show that in his case, it stands for Rudolph.

The Compensation Claims Division, for so these many years established in the Banning Headquarters, is now at home to callers on the eighth floor of the L. A. Office. H. M. Wolfson, in charge of the division, brought with him W. R. Farnsworth, Frieda Bonelli, Marion Crews, Edyth Clegg and A. F. Dignum. The eighth floor in town is also the headquarters of the Distribution Division. No particular point in mentioning it, but there it is.

* * *

A radio from the R. M. S. Maunganui, at sea, reports the following: H. E. "Hal" Munn, formerly Assistant Safety Engineer for the M. W. D. at Banning, and Mrs. Munn have sailed from San Francisco for Australia. In the land "down under" Hal Munn will superintend mining operations at Mt. Isa for the American Smelting and Refining Co. En route, the Munn's will stop over at Tahiti, Rarotonga, Wellington, N. Z., and Sidney, Australia.

* * *

Charles A. Ramp, dragline operator at Wide Camp, is happy to report the arrival of Charles Roy Ramp, 7 pounds flat, at 9 A.M. on Sunday, September 20. Our Banning correspondent states that the mother and son are doing fine but that the father is still shaky.

* * *

John Austin, formerly Concrete Superintendent at Berdoo and the East Coachellas, is now Superintendent of the Lawrence Adit on the San Jacinto tunnel.

* * *

A note from Downey tells of the wedding on September 12, of Barbara Harris and Charles Buchner. "Charlie" Buchner works for Broderick and Gordon on the Eagle Mt. tunnel.

* * *

The first time some hardrocker in the San Jacinto tunnel reports that he has caught a Columbia River salmon in the heading, cross your fingers before you give him the well known Bronx salutation. Reputable geologists are said to be investigating the possibility that part of the Columbia River is flowing under San Gorgonio Pass. It is a fact that the Snake River, in joining the Columbia, immediately loses one-half of its discharge. The theory is that the lost volume of the Snake, guided by underground formations, eventually reaches Southern California.

Boulder Dam—Ht. Thirty-two Feet

"Dick" Stephens has come across an interesting engineering report, which, though only written 30 years ago, illustrates just how much the southwestern part of the United States has developed since 1906. The report, prepared by the late Don J. McPhearson, a Los Angeles engineer who had his office in the Bryn Building, covers the building of a dam and electrical power plant in Boulder Canyon, close to the site of the present Boulder Dam. The dam was to have been a combination crib and loose rock, 240 feet long between masonry abutments, and with a height of 32 feet above low water. The diversion tunnel for the power plant was to be 600 feet long, and two 80-mile electric power lines were to be built, one to Searchlight, and one to the mining districts of Chloride and Gord Road. The engineer believed that eventually the power plant could dispose of 10,000 H. P., although the first development was slated for 2,000 H. P. The total cost of the project was to be \$340,000.

Advantages of a Linguist

One of the sidelights on the visit of the delegates of the World Power Conference (story page 3) was the frantic search by the L. A. Personnel office for qualified interpreters. After scouring the field, a group was picked consisting of E. L. Falkenburg, Electrical, and speaking Portuguese; H. F. Finch, Design, French; P. F. Gemperle, Distribution, Swiss and German; Conrad Sangren, Purchasing, Swedish, and Mr. Hinds and Mr. Diemer handling the Spanish contingent. With the aid of sign language these linguists ably told the story of the aqueduct. The group from Sweden rode in the same bus with Mr. Hinds, and he, finding that one of their number spoke excellent English as well as Swedish, spent extra time pointing out the construction features to the bright young man from Sweden. It wasn't until the delegates had been put on their train that night, that Mr. Hinds discovered that one of the Swedish group had missed the train—at any rate, he was still on hand. Was someone's face red, when the much honored "guest" was identified as Conrad Sangren of the M. W. D. Purchasing Division?

Who's Who On the Aqueduct

CLYDE W. WOOD

Wood and Bevanda

All his experience has been as an engineer and contractor. . . . Engineering experience listed as "everything from stake puncher to chief engineer of a large irrigation project near Fresno" . . . Is a member of the American Society of Civil Engineers. . . . Is one of the original old timers on M. W. D. aqueduct construction. First contract with the District was for road construction in 1932. . . . Built a total of 130 miles of the aqueduct roads. . . . Invented an oil mixing machine used in laying oil on these roads, and also in use on road construction in various parts of the west. . . . His firm now has contracts

Assistant City Engineer, Calgary, Alberta. . . . 1916-33 construction superintendent U. S. Bureau of Reclamation; engineer Washington State reclamation service; construction engineer for Spokane Valley Farms Company irrigation system; resident engineer for L. A. County Sanitation Districts. . . . Has been with M. W. D. since 1933 as senior engineer in charge of Distribution Division preliminary surveys, and construction of pipe lines. . . . Is married and has two sons.

L. E. DIXON

General Manager Dixon, Bent, Johnson, and Dixon-Case.

Born in Iowa in 1892. . . . 1912 entered office of Thornton Fitzgerald in practice



Clyde W. Wood



H. R. Bolton



L. E. Dixon

for Schedules 6, 8, 8A and 8B and the Iron Mt. pumping plant. He developed both a canal trimmer and a canal paving machine. . . . He is married and has four sons.

H. R. BOLTON

*Resident Engineer Open Work,
Distribution Division, M.W.D.*

Few people know that his first name is Harry, and not "Ben" as he is known all over the job. . . . Born at Findlay, Ohio, in 1887. . . . Educated at Ohio State University. . . . 1907-08 instrumentman on construction Chicago, Lake Shore, and South Bend R. R. . . . Experience includes 10 years on irrigation and reclamation projects and nine years on sanitary sewer systems. . . . 1913-15

of structural engineering. . . . 1913-1916 member of organization of P. H. Arnold one of the principal building contractors in Los Angeles at that time. . . . In 1917 organized firm of Edwards, Wildey and Dixon, firm name changed to L. E. Dixon Co., in 1929. . . . During that period built many downtown L. A. buildings, the Shrine Auditorium and the L. A. Coliseum. . . . Firm of Dixon, Bent and Johnson built west portion of West Eagle Mt. tunnel on main aqueduct, and are constructing Monrovia 4, Pasadena, and San Rafael No.'s 1 and 2 on Distribution. Firm of Dixon-Case now constructing Hayfield Pumping Plant. . . . Mr. Dixon is married and has two sons and two daughters.

NEW BRIDGE AT PARKER

The Board of Supervisors of San Bernardino County have announced the construction of a new \$150,000 bridge across the Colorado River between Earp and Parker. The connecting highway leading to the bridge on the California side will be across property owned by the M. W. D. The span of the bridge will be 670 feet long with 14-foot approaches at each end. Construction of the bridge is expected to be started in the immediate future.

M. W. D. BIG AID TO RECOVERY

Consuming 15,699 car loads of material since January 1, 1936, the Metropolitan Water District ranks today as one of the major factors in business and industrial recovery, not only in Southern California, but all over the United States. Car loadings this year have averaged better than 1,800 per month. With open work construction again started, it is expected that the peak of 2,665 cars used in April will be exceeded during one of the fall months.